REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 28-29 have been added. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-29 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, claims 12, 14-15, 24, and 26-27 were rejected under 35 U.S.C. § 102 in view of U.S. Patent No. 6,359,610 to Shah et al. ("Shah"). This rejection is traversed and reconsideration is requested.

Shah describes a wireless interface system to allow a plurality of input devices to control a processor. A transmitter 14 modulates a carrier and transmits the modulated carrier through an antenna 15. See column 4, lines 49-52 of Shah. The modulated carrier is propagated wirelessly from antenna 15 to an antenna 16. A receiver 18 includes circuitry to receive the modulated carrier from antenna 16. See column 4, lines 54-55 of Shah. However, Shah fails to teach or suggest, "a plurality of wave direction parts which are **provided close** to said transmission part," emphasis added, as recited in independent claim 12. Even assuming, arguendo, that the plurality of wave direction parts of independent claim 12 are the antennas 15 and 16, nothing in Shah indicates that both antennas 15 and 16 "provided close to said transmission part," as recited in independent claim 12.

Shah fails to teach or suggest, " a plurality of wave direction parts which are provided close to said transmission part so as to provide the signal transmitted from said transmission part with directivity," as recited in independent claim 12. According to Shah, it is only the antenna 15 that provides directivity to a modulated signal, rather than a plurality of wave direction parts. According to one of the many benefits of the present invention, because the directivity is provided by the plurality of wave direction parts, the field strength can be increased in the direction of radiation (or in the direction of a reception antenna) while the radiation in other directions is minimized. Thus, it is less likely that received power decreases due to fading, so that the transmitted signal (information) can be efficiently received.

Independent claim 24 recites "a plurality of wave direction parts which are provided close

to said transmission part so as to provide the signal transmitted from said transmission part with directivity." The arguments provided above supporting the patentability of independent claim 12 are incorporated herein to support the patentability of independent claim 24. Accordingly, independent claims 12 and 24 and related dependent claims are patentable in view of the references cited. It is respectfully requested that the rejection to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 3, claims 1-7, 11, 13, 16-21, and 25 were rejected under 35 U.S.C. § 103 in view of Shah and U.S. Patent No. 6,229,526 to Berstis ("Berstis"). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

The statements presented above regarding Shah are incorporated herein. Berstis provides one or more wireless remote control devices 101 and 103 for use with a data processing system. See column 4, lines 37-40 of Berstis. Each of the remote control devices 101 and 103 generates control signals that are typically imposed on light signals. See column 4, lines 40-42 of Berstis. Preferably, the devices 101 and 103 use carrier signals in the infrared region. See column 4, lines 42-43 of Berstis. Each of the devices 101 and 103 may operate on the same carrier frequency, or on different carrier frequencies. See column 4, lines 43-46 of Berstis. Interference between the devices, however, is avoided by selectively actuating each of the devices at a different time using polling signals. See column 4, lines 46-49 of Berstis.

One of the many advantages of the present invention provides that because the same input information is transmitted using a plurality of carrier frequencies, the transmitted signal (information) is less subject to fading, so that the overall received signal level can be increased. For instance, a wave of a certain carrier frequency (f1) is free of fading where the level of a wave of another carrier frequency (f2) is reduced due to fading, so that the input information, which may not be received with a single wave, can be received.

Berstis and Shah fail to teach or suggest "a transmission part which transmits signals generated by having a plurality of different carrier frequencies modulated with the input information," as recited in independent claim 1. Shah is silent as provided such claimed feature. The devices 101 and 103 of Berstis are selectively actuated to transmit a control signal at different time, so as not to cause interference. At a point in time, one of the devices 101 or 103

would output the control signal imposed with the light signal with one carrier frequency. At another point in time, the other device 101 or 103 would output the control signal imposed with the light signal with another carrier frequency. However, assuming, arguendo, that the devices 101 and 103 are the transmission part of independent claim 1, the control signal of Berstis would not be transmitted at a point in time "having a plurality of different carrier frequencies modulated with the input information," as recited in independent claim 1.

Referring to independent claim 16, this claim recites, "a transmission part which transmits signals generated by having a plurality of different carrier frequencies modulated with the input information." The arguments provided above supporting the patentability of independent claim 1 are incorporated herein to support the patentability of independent claim 16.

Furthermore, without adequate support from Shah and/or Berstis of a need or motivation to prevent interference in Shah, the Office Action indicates that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features as taught by Berstis for the purpose of preventing interference from light behind the screen." Rather than using the teachings of the cited references, the Office Action combines the references by disregarding current case law regarding the standard of an obviousness rejection under 35 U.S.C. § 103.

It is improper to merely deem something obvious without any teaching/suggestion from the cited references. As applied to the determination of patentability when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. §103 must be based on evidence comprehended by the language of that section." See In re Lee, 61 USPQ2d 1430 (Fed. Cir. 2002), (citing In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983)). The essential factual evidence on the issue of obviousness is set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See In re Lee, 61 USPQ2d 1430 (CA FC 2002), (citing McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("The central question is whether there is reason to combine [the] references," a question of fact drawing on the Graham factors). Accordingly, evidence must be provided from the prior art of some teaching, motivation, or suggestion to select and combine the

references.

Thus, as pointed out in In re Lee, the record must support motivation, i.e., there must be something in the record pointing out where the recited motivation can be found. In addition, there must be some discussion on how that purported motivation or suggestion is even relevant to the reference being modified.

It is the Applicants' position that only the present invention sets forth all the claimed features, as well as the motivation for combining the same. The outstanding rejection would appear to have taken the teachings of the present invention and applied the same to generate a combination of Shah and Berstis as set forth in the Office Action. In view of the foregoing, it is respectfully requested that independent claims 1 and 16 and related dependent claims be allowed. New claims 28 and 29 depend on independent claims 1 and 16, respectively. Accordingly it is respectfully requested that dependent claims 28 and 29 dependent to independent claims 1 and 16, respectively, be allowed.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please ADD new dependent claims 28-29 as follows. The remaining claims are reprinted, as a convenience to the Examiner, as they presently stand before the U.S. Patent and Trademark Office.

1. (UNAMENDED) An input system comprising:

an information generation part which generates input information based on a given input operation;

a transmission part which transmits signals generated by having a plurality of different carrier frequencies modulated with the input information; and

a reception part which receives the transmitted signals and demodulates the signals into the input information.

2. (UNAMENDED) The input system as claimed in claim 1, further comprising wave direction parts which are provided close to said transmission part so as to provide the signals transmitted from said transmission part with directivity.

3. (UNAMENDED) The input system as claimed in claim 2, wherein said wave direction parts are antennas.

4. (UNAMENDED) The input system as claimed in claim 1, wherein said transmission part comprises a plurality of transmission circuits for transmitting the signals of the different carrier frequencies.

5. (UNAMENDED) The input system as claimed in claim 1, wherein said transmission part comprises:

an output part which successively outputs the different carrier frequencies; and

a modulation part which has the different carrier frequencies modulated with the input information.

6. (UNAMENDED) The input system as claimed in claim 4, wherein each of the transmission circuit comprises: an output part which outputs a corresponding one of the different

carrier frequencies; and

a modulation part which has the corresponding one of the different carrier frequencies modulated with the input information.

7. (UNAMENDED) The input system as claimed in claim 1, wherein said reception part comprises a plurality of reception circuits for receiving the transmitted signals and demodulating the signals into the input information.

8. (UNAMENDED) The input system as claimed in claim 1, further comprising a pad member including conductive wire.

9. (UNAMENDED) The input system as claimed in claim 1, further comprising a conductive part,

wherein a user contacts said conductive part so that the signals transmitted from said transmission part are transmitted via said conductive part to the user.

10. (UNAMENDED) The input system as claimed in claim 1, further comprising:

a conductive plate member; and a conductive part,

wherein said conductive part contacts said conductive plate member so that the signals transmitted from said transmission part are

transmitted via said conductive part to said conductive plate member.

11. (UNAMENDED) The input system as claimed in claim 1, further comprising a plurality of wave direction parts for receiving the signals transmitted from

said transmission part, said wave direction parts being provided on a side of said reception part.

12. (UNAMENDED) An input system comprising:

an information generation part which generates input information based on a given input operation;

a transmission part which transmits a signal generated by having a carrier frequency modulated with the input information;

a plurality of wave direction parts which are provided close to said transmission part so as to provide the signal transmitted from said transmission part with directivity; and

a reception part which receives the transmitted signal and demodulates the signal into the input information.

13. (UNAMENDED) The input system as claimed in claim 12, further comprising a switching part which transmits the transmitted signal selectively to one of said wave direction parts based on a control signal supplied from said information generation part.

14. (UNAMENDED) The input system as claimed in claim 12, wherein said transmission part comprises a plurality of transmission circuits for transmitting the signal.

15. (UNAMENDED) The input system as claimed in claim 12, wherein said wave direction parts are antennas.

16. (UNAMENDED) An input device comprising:

an information generation part which generates input information based on a given input operation; and

a transmission part which transmits signals generated by having a plurality of different carrier frequencies modulated with the input information.

17. (UNAMENDED) The input device as claimed in claim 16, further comprising wave direction parts which are provided close to said transmission part so as to provide the signals transmitted from said transmission part with directivity.

18. (UNAMENDED) The input device as claimed in claim 17, wherein said wave direction parts are antennas.

19. (UNAMENDED) The input device as claimed in claim 16, wherein said transmission part comprises a plurality of transmission circuits for transmitting the signals of the different carrier frequencies.

20. (UNAMENDED) The input device as claimed in claim 16, wherein said transmission part comprises:

an output part which successively outputs the different carrier frequencies; and

a modulation part which has the different carrier frequencies modulated with the input information

21. (UNAMENDED) The input device as claimed in claim 19, wherein each of the transmission circuit comprises:

an output part which outputs a corresponding one of the different carrier frequencies; and

a modulation part which has the corresponding one of the different carrier frequencies modulated with the input information.

22. (UNAMENDED) The input device as claimed in claim 16, further comprising a conductive part provided on a surface of the input device,

wherein a user contacts said conductive part so that the signals transmitted from said transmission part are transmitted via said conductive part to the user.

23. (UNAMENDED) The input device as claimed in claim 16, further comprising a conductive part provided on

a bottom of the input device,

wherein said conductive part contacts a conductive plate member so that the signals transmitted from said transmission part are transmitted via said conductive part to the conductive plate member.

24. (UNAMENDED) An input device comprising:

an information generation part which generates input information based on a given input operation;

a transmission part which transmits a signal generated by having a carrier frequency modulated with the input information; and

a plurality of wave direction parts which are provided close to said transmission part so as to provide the signal transmitted from said transmission part with directivity.

25. (UNAMENDED) The input device as claimed in claim 24, further comprising a switching part which transmits the transmitted signal selectively to one of said wave direction parts based on a control signal supplied from said information generation part.

26. (UNAMENDED) The input device as claimed in claim 24, wherein said transmission part comprises a

plurality of transmission circuits for transmitting the signal, the transmission circuits corresponding to the wave direction parts.

27. (UNAMENDED) The input device as claimed in claim 24, wherein said wave direction parts are antennas.

28. (NEW) The input system as claimed in claim 1, wherein said transmission part comprises a switching part that causes switching between the different carrier frequencies so that the different carrier frequencies are alternately modulated with the input information.

29. (NEW) The input system as claimed in claim 16, wherein said transmission part comprises a switching part that causes switching between the different carrier frequencies so that the different carrier frequencies are alternately modulated with the input information.